

WHAT IS CLAIMED IS:

1. A bridge circuit in a computer system for providing data transfers between a processor and a peripheral device, comprising:
 - a first buffer in communication with a processor and a peripheral device;
 - 5 a second buffer in communication with said processor, said peripheral device and said first buffer;
 - control logic for controlling said first buffer and said second buffer as a matched pair so that an address held in said first buffer corresponds to data held in said second buffer; and
 - 10 an arbiter for controlling concurrent bi-directional data flow between said processor and said peripheral device through said second buffer.